

Appendix F

Project Correspondence

CONTACT MEMO

Date: December 15, 2004
Contacted: Mr. Mike Valent
Affiliation: NJDEP Division of Fish and Wildlife
By: Eileen Flarity-Loftus
Regarding: Bald eagle foraging habitat near Route 92 alignment
cc: File

Mr. Valent advised that the latest version (Version 2.0) of New Jersey Landscape Project Mapping available to the public on NJDEP's website does not show McCormack Lake and surrounding emergent wetlands as foraging habitat for a pair of nesting bald eagles. This is because this pair of bald eagles has recently established a nest near Carnegie Lake in Princeton and hence, their foraging habitat is not shown on Version 2.0 of the Landscape Project mapping. As long as this nest remains active, this pair's foraging habitat will be included in the next released version of Landscape Project mapping.



State of New Jersey

Department of Environmental Protection

Division of Parks and Forestry
Office of Natural Lands Management
Natural Heritage Program

P.O. Box 404
Trenton, NJ 08625-0404
Tel. #609-984-1339
Fax. #609-984-1427

James E. McGreevey
Governor

Bradley M. Campbell
Commissioner

December 3, 2002

Kalsoum Abbasi
CDM
Raritan Plaza 1, Raritan Center
Edison, NJ 08818-3142

Re: Route 92

Dear Ms. Abbasi:

Thank you for your data request regarding rare species information for the above referenced project site in South Brunswick Township, Middlesex County.

The Natural Heritage Data Base has records for occurrences of *Ranunculus pusillus* var. *pusillus* and *Sagittaria australis* that may be on the site, and for *Anax longpipes*, *Elatine americana*, *Eupatorium Altissimum*, *Gentiana saponaria* var. *saponaria*, *Myriophyllum tenellum*, *Utricularia gibba*, *Viola brittoniana* var. *brittoniana* and *Isoetes riparia* var. *riparia* that may be in the immediate vicinity of the site. The attached lists provide more information about these occurrences. **Because some species are sensitive to disturbance or sought by collectors, this information is provided to you on the condition that no specific locational data are released to the general public. This is not intended to preclude your submission of this information to regulatory agencies from which you are seeking permits.**

The Landscape Project (Version 1.0) shows that suitable habitat patches of emergent wetland, forest, grassland and forested wetland occur on the project site, and has records for bobolink, savannah sparrow and wood turtle in habitat patches that are on the project site. The attached list provides more information about those records that are also in the Natural Heritage Data Base.

Also attached is a list of rare species and natural communities that have been documented from Middlesex County. This county list can be used as a master species list for directing further inventory work. If suitable habitat is present at the project site, these species have potential to be present. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend you contact the Division of Fish and Wildlife, Endangered and Nongame Species Program.

PLEASE SEE THE ATTACHED 'CAUTIONS AND RESTRICTIONS ON NHP DATA'.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

Herbert A. Lord

Herbert A. Lord
Data Request Specialist

cc: Thomas F. Breden
Lawrence Niles
NHP File No. 02-4007435



United States Department of the Interior
FISH AND WILDLIFE SERVICE

New Jersey Field Office
927 North Main Street, Building D
Pleasantville, New Jersey 08232

Tel: 609-646-9310

Fax: 609-646-0352

<http://njfieldoffice.fws.gov>



IN REPLY REFER TO:
ES-02/776

NOV 13 2002

Kalsoum Abbasi, Environmental Engineer
CDM
Raritan Plaza I, Raritan Center
Edison, New Jersey 08818-3142

Reference: Threatened and endangered species review within the vicinity of the proposed Route 92 highway construction project located within South Brunswick, Monroe, and Plainsboro Townships, Middlesex County, New Jersey.

The U.S. Fish and Wildlife Service (Service) has reviewed the proposed project(s) pursuant to the Endangered Species Act (ESA) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*) to ensure the protection of federally listed and proposed endangered and threatened species. The following comments do not address all Service concerns for fish and wildlife and do not preclude separate review and comment afforded by other applicable environmental legislation.

Endangered species and their habitats are protected by Section 7(a)(2) of the ESA, which requires federal agencies, in consultation with the Service, to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of critical habitat. An assessment of potential direct, indirect, and cumulative impacts is required for all federal actions that may affect listed species.

Potentially suitable habitat for the **bog turtle (*Clemmys muhlenbergii*)** (federally listed as threatened) occurs on or in the vicinity of the proposed project site(s). In New Jersey, bog turtles inhabit open, wet meadows and bogs with standing or slow-moving shallow water over a mucky substrate, emergent and scrub/shrub wetlands, spring-fed fens, and forested wetlands that contain emergent or scrub/shrub wetlands.

To assist you in determining potential impacts of the proposed project(s) on the bog turtle, more detailed information regarding the species and its habitat is enclosed. If any wetlands as described above will be disturbed, or if materials will be discharged into or upstream of such wetlands, the Service requests a **habitat survey** of the project area(s) by a qualified herpetologist (see attached list of recognized qualified bog turtle surveyors) to determine presence or absence of bog turtle habitat. If the survey documents the presence of bog turtles, or habitat, within the project area(s), an assessment of potential project impacts must also be completed. Project construction or implementation must not commence until the survey results and assessment of impacts have been forwarded to this office to determine if consultation under Section 7 of the ESA is required between the federal action agency and the Service. If you have any questions or require further assistance regarding threatened or endangered species, please contact the Reviewing Biologist at (609) 646-9310. Please refer to the above document control number in correspondence.

Reviewing Biologist: *Lisa Solberg* ext. 47

Authorizing Supervisor: *J.L.C. [Signature]*

Enclosures: Survey guidance and list of recognized qualified surveyors
Current summaries of federally listed and candidate species in New Jersey
Addresses for additional information on candidate and State-listed species
Permit requirements for activities in wetlands

SPECIES REFERRALS TO OTHER AGENCIES

MARINE SPECIES/ENVIRONMENT

- ☐ The proposed project is located in or may affect the following marine or estuarine environment:
- ☐ The following federally listed marine species occurs in the vicinity of the project site:

The Service provides the enclosed determination with respect to federally listed or proposed threatened or endangered flora and fauna under Service jurisdiction only. Principal responsibility for threatened and endangered marine species is vested with the National Marine Fisheries Services (NMFS). Therefore, the NMFS must be contacted to fulfill consultation requirements pursuant to Section 7(a)(2) of the Endangered Species Act:

National Marine Fisheries Service
Habitat and Protected Resources Division
Sandy Hook Laboratory
Highlands, New Jersey 07732
(732) 872-3023

OTHER SPECIES OF CONCERN

Plants

There is a known occurrence of the following plant species in the vicinity of the project site:

- ☐ State-listed as endangered:
- ☐ plant species of concern in New Jersey:

The Service recommends that:

- ☐ project proponents contact the New Jersey Natural Heritage Program (address also enclosed) for recommendations to avoid adverse effects to rare or State-endangered plant species.
- ☐ a qualified botanist survey the project site for the presence or absence of the above species. Any field surveys should be coordinated with the New Jersey Natural Heritage Program.

Animals

There is a known occurrence of the following animal species in the vicinity of the project site:

- ☐ State-listed as endangered:
- ☒ State-listed as threatened: **Cooper's hawk (*Accipiter cooperii*), savannah sparrow (*Passerculus sandwichensis*), and wood turtle (*Clemmys insculpta*)**
- ☐ animal species of concern in New Jersey:

The Service recommends that:

- ☐ project proponents contact the New Jersey Endangered and Nongame Species Program (address also enclosed) for recommendations to avoid adverse effects to rare or State-listed animal species.
- ☒ a qualified biologist survey the project site for the presence or absence of the above species. Any field surveys should be coordinated with the New Jersey Endangered and Nongame Species Program

COMMENTS



State of New Jersey

James E. McGreevey
Governor

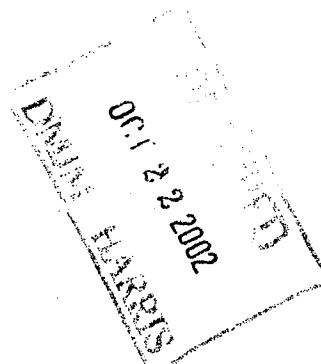
Department of Environmental Protection
Land Use Regulation Program
P.O. Box 439, Trenton, NJ 08625-0439
Fax # (609) 777-3656
www.state.nj.us/dep/landuse

Bradley M. Campbell
Commissioner

Timothy M. Hand
DMJM & HARRIS, Inc.
485-B U.S. Route One South
Iselin, New Jersey 08830

OCT 16 2002

RE: Letter of Interpretation/Line Verification Reissuance
File No.: 0000-02-0030.1FWW020001
Applicant: New Jersey Turnpike Authority
Block: various; Lot: various
Monroe, South Brunswick and Plainsboro Townships
Middlesex County



Dear Mr. Hand:

The New Jersey Department of Environmental Protection issued a Letter of Interpretation for the referenced site on August 27, 1997. You have requested that the Letter of Interpretation be reissued in accordance with the requirements at N.J.A.C. 7:7A-3.7.

In accordance with agreements between the State of New Jersey Department of Environmental Protection, the U.S. Army Corps of Engineers Philadelphia and New York Districts, and the U.S. Environmental Protection Agency, the NJDEP, Land Use Regulation Program is the lead agency for establishing the extent of State and Federally regulated wetlands and waters. The USEPA and/or USACOE retain the right to reevaluate and modify the jurisdictional determination at any time should the information prove to be incomplete or inaccurate.

Based upon the information submitted, the Land Use Regulation Program has determined that the wetlands and waters boundary line(s) as shown on the plan map entitled: "NEW JERSEY TURNPIKE AUTHORITY, NEW JERSEY TURNPIKE ROUTE 92, WETLAND DELINEATION BOUNDARY MAP", dated October 1995, sheets 1, 3-6, 11-15, 17 and 18 last revised May 10, 1996, sheets 9, 10, and 13 last revised September 25, 1996, sheets 7 and 8 last revised July 22, 1997, and sheets 2, 16, and 19 last revised October 13, 1997, and prepared by Frederic R Harris, Inc., is accurate as shown.

Therefore the term of the original Letter of Interpretation is hereby extended to August 27, 2007, which is five years from the expiration of the original Letter of Interpretation.

Any activities regulated under the Freshwater Wetlands Protection Act proposed within the wetlands or transition areas or the deposition of any fill material into any water area, will

require a permit from this office unless exempted under the Freshwater Wetlands Protection Act, N.J.S.A. 13:9B-1 et seq., and implementing rules, N.J.A.C. 7:7A.

The freshwater wetlands and waters boundary line(s), as determined in this letter, must be shown on any future site development plans. The line(s) should be labeled with the above LURP file number and the following note:

"Freshwater Wetlands/Waters Boundary Line as verified by NJDEP."

In addition, the Department has determined that the resource classification of wetlands is as follows:

Swales and ditches of ordinary resource value

Sheet 2- PEM (6) and the wetlands delineated by flags XX1-XX3 and XX19-XX21

Sheet 3- PEM (8)

Sheet 10- drainage ditch (50) and the wetlands delineated by flags H-17 to H-22

Sheet 15- swale (72)

Sheet 19- PEM (89-93) and the ditch delineated by flags DE5 to DE27

Detention basins of ordinary resource value

Sheet 3- PEM (7)

Sheet 18- PEM (81)

Isolated wetlands of ordinary resource value

Sheet 18- PEM (79), (82-85)

Sheet 19-PEM (88)

State open waters

Sheet 8- POW (28)

Sheet 10-POW (47)

Sheet 17- POW/Retention Basin (76) and (77)

The remainder of wetlands within the project limit are Intermediate resource value and the standard transition area or buffer required adjacent to these wetlands is 50 feet. In addition, the wetlands delineated by lines D, E, F, J, and K on sheet 1, labeled PEM (34) on sheet 9, PFO1/PSSI (41), on sheet 10, PEM/PSSI (60) on sheet 13, PEM (66) on sheet 14 are isolated. Wetlands of ordinary resource value and State Open waters do not require a wetland buffer.

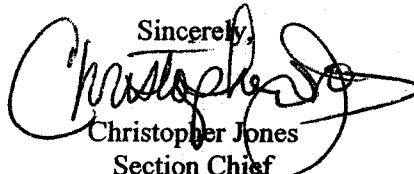
This classification may affect the requirements for an Individual Wetlands Permit (see N.J.A.C. 7:7A-), the types of Statewide General Permits available for the wetlands portion of this property (see N.J.A.C. 7:7A-5) and the modification available through a transition area waiver (see N.J.A.C. 7:7A-6). Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing rules for additional information.

It should be noted that this determination of wetlands classification is based on the best information presently available to the Department. The classification is subject to change if this information is no longer accurate, or as additional information is made available to the Department, including, but not limited to, information supplied by the applicant.

This letter in no way legalizes any fill which may have been placed, or other regulated activities which may have occurred on-site. Also this determination does not affect your responsibility to obtain any local, State, or Federal permits which may be required.

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days of the decision date by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, CN 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist.

Please contact Susan Butler of our staff at (609) 633-6754 or by e-mail at Susan.Butler@dep.state.nj.us should you have any questions regarding this letter. Be sure to indicate the Program's file number in all communication.

Sincerely,

Christopher Jones
Section Chief
Bureau of Inland Regulation

c: Monroe, South Brunswick and Plainsboro Township Clerk
Monroe, South Brunswick and Plainsboro Township Construction Official



New Jersey Turnpike Authority

ADMINISTRATION BUILDING P.O. BOX 1121 NEW BRUNSWICK, NEW JERSEY 08903
TELEPHONE (732) 247-0900

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EDWARD GROSS
EXECUTIVE DIRECTOR

November 10, 1999

Mr. Joseph J. Seebode, Chief
Regulatory Branch
U. S. Army Corps of Engineers – New York District
Jacob K. Javits Federal Building
New York, New York 10278-0090

Re: Route 92

Dear Mr. Seebode:

Following recent discussions with you and your staff regarding the renewed usage of the 1987 *Corps of Engineers Wetlands Delineation Manual* (1987 Manual) by the United States Army Corps of Engineers (USACE), the New Jersey Turnpike Authority (NJTA) has revisited the wetland delineation for the Route 92 project. The Route 92 wetlands were originally delineated for a New Jersey Department of Environmental Protection (NJDEP) Letter of Interpretation (LOI). NJDEP regulations require usage of the 1989 *Interagency Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (1989 Manual). With the transfer of jurisdiction from the NJDEP to the USACE, coupled with the differences in wetlands delineation methodologies between the 1987 Manual and the 1989 Manual, it became apparent that the delineation of wetlands in some of the agricultural fields would differ.

Consequently, a field visit was conducted on Tuesday, October 5, 1999 to evaluate the USACE jurisdictional wetland boundary at three site locations pursuant to the 1987 Manual. These three areas were delineated as wetlands, based on the previous delineation conducted during the NJDEP LOI process, on the plans included in the NJTA's January 1999 USACE Section 404 permit application for Route 92. In attendance were representatives from the USACE (Jim Haggerty, Craig Spitz and Roberto Barbosa), the U. S. Environmental Protection Agency (Bob Montgomery), the NJTA (Bob Grimm) and Frederic R. Harris, Inc. (FRH - Christine Tiernan, Eileen Flarity-Loftus and Ann Reed). The three sites visited include an existing pasture located approximately 1,600 feet west of the 90 degree turn in Friendship Road; a portion of a cultivated soybean/corn field located west of and adjacent to the 90 degree turn in Friendship Road; and a portion of a cultivated corn field located on the south side of Friendship Road east of Miller Road. The location of these three sites is shown on the attached map.

NEW JERSEY TURNPIKE AUTHORITY

Joseph J. Seebode, USACE
Route 92

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As a result of the field visit and reevaluation pursuant to the 1987 Manual, the NJTA finds that two of these sites meet the definition of prior converted cropland and are not wetlands pursuant to the 1987 Manual. The third site meets the definition of farmed wetland and should continue to be classified as a wetland pursuant to the 1987 Manual.

Site #1 - Pasture Field West of Friendship Road

This pasture has been manipulated and cropped to the extent that it no longer exhibits important wetland values (i.e., flood control, water quality enhancement, aquatic diversity). According to the current property owner, this pasture is planted with a clover mix and has been used to harvest hay for more than 100 years. The property owner is not aware of any man-made hydrological alterations to this land, although that doesn't preclude such alterations from having occurred prior to his ownership. Based on the NJTA's studies of the site, as well as conversations with the property owner, it is the conclusion of FRH that this area is not inundated for more than 14 consecutive days during the growing season. Moreover, it is FRH's conclusion that this area would not revert to wetlands if left uncropped. For these reasons, this area meets the definition of a prior converted cropland, as defined by the Soil Conservation Service (SCS) in Section 512.15 of the National Food Security Act Manual (NFSAM, August 1988).

In addition, analysis of the three required wetland parameters (hydrophytic vegetation, hydric soils and hydrology) is as follows:

- The hydrophytic vegetation criterion is not met. Dominant vegetation includes milkweed (*Asclepias syriaca*, NL), curly dock (*Rumex crispus*, FACU), and creeping thistle (*Cirsium arvense*, FACU), as listed on the original field data forms for this location (attached, Plot Nos. S3 and S4), which are not hydrophytic species.
- Hydric soils (i.e., low chroma soils with mottling) were observed at or below 12 inches. According to the Munsell Soil Charts, the matrix color was 10 YR 4/1 and the mottle colors were 10 YR 6/6 and 10 YR 5/1. Hydric soils, pursuant to the 1987 Manual, must be within 12 inches of the surface; therefore, compliance with this criterion is marginal at this location.
- At least one primary indicator of wetland hydrology (i.e., observed inundation, observed soil saturation, water marks, drift lines, sediment deposits, drainage patterns) or two secondary indicators of wetland hydrology (i.e., abundant oxidized root channels, water stained leaves, positive FAC neutral test, soil survey data) must be observed to satisfy the hydrology parameter for a wetland determination. No primary indicators were observed in the pasture. Only one secondary indicator was observed in the western portion of the pasture. The western portion of the pasture is mapped as Fallsington loam (Fb), a hydric soil, on the soil survey for Middlesex County. The eastern portion of the pasture is mapped as Woodstown loam (WIA) on the soil survey, which is not a hydric soil.

NEW JERSEY TURNPIKE AUTHORITY

Joseph J. Seebode, USACE
Route 92

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The 1987 Manual requires that oxidized root channels in the upper 12 inches must be present in abundance to be considered a secondary indicator. During a supplemental field visit by FRH on November 2, 1999, additional soil borings were taken (attached, Data Forms SA1 and SA2). Although oxidized root channels were observed in spot locations, they were not observed in abundance; therefore, they are not considered a secondary indicator in this pasture. Since the western portion of the pasture has no primary indicators and only one secondary indicator, and the eastern portion of the pasture has no primary or secondary indicators, the pasture does not satisfy the hydrology parameter for a wetland determination.

The wetland boundary maps originally submitted to the NJDEP for an LOI did not identify this area as a wetland. Accordingly, the original field data form submitted with the Wetlands Delineation Report (FRH, 1995) confirms that this area does not meet the wetland criteria, as no standing water, soil saturation or other wetland hydrology indicators were observed (attached, Plot No. S3).

This pasture should be classified as prior converted cropland and, therefore, not under USACE jurisdiction. Further, this pasture has been altered to such an extent that it does not meet the definition of a wetland pursuant to the 1987 Manual, since all three parameters are not met. Demapping of this area results in a 1.24-acre reduction in wetlands to be permanently filled by the construction of Route 92, and a 0.39-acre reduction in temporary wetlands impact.

Site #2 - Soybean/Corn Field West of Bend in Friendship Road

This field has been manipulated to the extent that it no longer exhibits any important wetland values. According to the current property owner, this area underwent vegetative and hydrological alteration. The vegetative alteration consisted of cropping the land. This area has been farmed since the mid-18th century and is currently rotated between soybean and corn. The hydrological alteration consisted of relocating an existing intermittent stream south, to achieve a straight course through the adjacent field. This stream relocation included the spreading of the spoils from the relocation over the soybean/corn field. Hence, this resulted in moving the stream further away from the area in question and elevating the soybean/corn field, resulting in hydrological alteration. These substantial modifications lead to the conclusion that this area would not revert to wetland if left uncropped. For these reasons, this area meets the definition of a prior converted cropland, as defined by the SCS in Section 512.15 of the NFSAM.

In addition, analysis of the three required wetland parameters is as follows:

- The hydrophytic vegetation criterion is not met. Dominant vegetation consists of soybean (*Glycine max*), which is not listed on the *National List of Plant Species That Occur in Wetlands: Northeast (Region 1)*, 1988; therefore, it is not a hydrophytic plant species.

NEW JERSEY TURNPIKE AUTHORITY

Joseph J. Seebode, USACE
Route 92

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Subdominant species observed include common cocklebur (*Xanthium chinense*, NL), stinging nettle (*Urtica dioica*, FACU), creeping thistle, curly dock and pokeweed (*Phytolacca americana*, FACU+), which are upland, non-hydrophytic species.

- Hydric soils were observed within 12 inches of the ground surface; therefore, the hydric soil criterion is met. According to the Munsell Soil Color Charts, the matrix soil color at this location was 10 YR 4/1 with mottle colors of 10 YR 5/4 and 10 YR 6/2.
- No primary or secondary indicators of wetland hydrology were observed in this location; therefore, the hydrology parameter for a wetland determination is not met.

This field should be classified as prior converted cropland and, therefore, not under USACE jurisdiction. Further, this field does not meet the definition of a wetland pursuant to the 1987 Manual, since all three parameters are not met. Demapping of this area results in a 0.39-acre reduction in wetlands to be permanently filled by the construction of Route 92, and a 0.02-acre reduction in temporary wetlands impact.

Site #3 - Corn Field East of Miller Road

This field has been farmed for many years (prior to 1985) and has been manipulated to the extent that it no longer exhibits any wetland values; however, this field is bisected by an intermittent watercourse that, during flooding events, could lead to inundation for more than 14 consecutive days during the growing season. It is uncertain if this area would revert back to wetlands if left alone for several years. These facts lead to a designation of this area as farmed wetland.

In addition, analysis of the three required wetland parameters is as follows:

- The hydrophytic vegetation criterion is not met. Dominant vegetation includes corn (*Zea mays*), which is not listed on the *National List of Plant Species That Occur in Wetlands: Northeast (Region 1)*, 1988.

Subdominant species observed include small-flowered aster (*Aster vimineus*, FAC), sweet everlasting (*Gnaphalium obtusifolium*, NA), curly dock (FACU), green foxtail (*Seteria viridis*, NA), rough-stemmed goldenrod (*Solidago rugosa*, FAC), tall ironweed (*Vernonia altissima*, FAC) and common cocklebur (*Xanthium pennsylvanicum*, NA). Of these species, only small-flowered aster and rough-stemmed goldenrod are considered hydrophytes pursuant to the 1987 Manual.

- Hydric soils were observed within 12 inches of the ground surface; therefore, the hydric soil criterion is met. According to the Munsell Soil Color Charts, the matrix color was 10 YR 3/1 with mottle colors of 10 YR 5/1 and 10 YR 6/6.

NEW JERSEY TURNPIKE AUTHORITY

Joseph J. Seebode, USACE
Route 92

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Page 5

- No primary or secondary indicators of wetland hydrology were observed at this location, although an existing intermittent stream bisects this area.

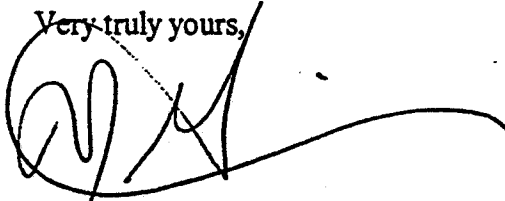
This field should be classified as farmed wetland and is, therefore, under USACE jurisdiction.

In summary, pursuant to the 1987 Manual, the NJTA concludes that two of the three sites in question should be classified as prior converted cropland, and do not contain the necessary parameters to meet the definition of a Section 404 jurisdictional wetland. The third site should be classified as farmed wetland. The total wetland to be permanently filled by the construction of Route 92 is reduced by 1.63 acres to 11.58 acres. The total temporary wetland impact is reduced by 0.41 acres to 2.87 acres.

The wetland impact plans, submitted as part of the NJTA's USACE Section 404 permit application in January 1999, will be revised to reflect the modifications to the wetland boundaries at the two sites classified as prior converted cropland. The revised permit plans will be submitted by the NJTA with the document addressing all the relevant project issues and public comments, as requested by the USACE at the August 17, 1999 meeting.

If you have any questions, please do not hesitate to contact Bob Grimm at (732) 247-0900 Ext. 5240. Thank you for your continued consideration of this important NJTA project.

Very truly yours,


for John G. Kunna, P.E.
Chief Engineer

Attachments

cc: E. Gross
R. J. Grimm

bcc: J. L. Williams
M. R. Greenberg (Riker-Danzig)
• C. Tiernan (FRH)
J. T. Bolan (PS&S)
File



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
927 North Main Street (Bldg. D1)
Pleasantville, New Jersey 08232



PL-NY-99/182

May 04, 1999

Colonel William H. Pearce
District Engineer
New York District
U.S. Army Corps of Engineers
26 Federal Plaza
New York, New York 10278-0090

Dear Colonel Pearce:

The U. S. Fish and Wildlife Service (Service) has reviewed Public Notice No. 1999-00240-J1 dated February 26, 1999. The Public Notice describes a New Jersey Turnpike Authority (NJTA) application to construct Route 92 through Plainsboro, Monroe, and South Brunswick Townships in Middlesex County, New Jersey. Construction of this roadway would result in the permanent loss of 14.82 acres of palustrine freshwater wetlands and palustrine open waters, and the temporary loss of 3.28 acres of freshwater wetlands and 0.05 acres of open waters. Additionally 1.16 acres of palustrine forested wetlands would be affected by shading as a result of highway structures.

As proposed, Route 92 would connect the New Jersey Turnpike at Interchange 8A to Route U.S. 1 near its intersection with Ridge Road and would be located in South Brunswick, Plainsboro, and Monroe Townships, Middlesex County, New Jersey. The stated purpose of the proposed Route 92 project is to reduce traffic on local east / west roads, improve local traffic intersections, and reduce traffic on Route U.S. 1 and on Route 130.

AUTHORITY

The following comments on the proposed activity have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. 661 *et seq.*) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), and are consistent with the intent of the Service's Mitigation Policy (Federal Register, Vol. 46, No. 15, Jan. 23, 1981). These comments are intended for your use in determining compliance with the Section 404(b)(1) Guidelines (40 CFR 230) and for protection of fish and wildlife resources in your public interest review (33 CFR 320.4). The Service's Mitigation Policy and the Section 404(b)(1) Guidelines emphasize that avoidance and minimization precede compensation, which is to be considered solely for unavoidable adverse impacts on fish and wildlife resources and supporting ecosystems.

The Service previously provided comments on the proposed project to the U.S. Environmental Protection Agency (USEPA) via letters dated December 6, 1996, March 28, 1997, and April 15, 1998 (enclosed). All three letters recommended that a FWPA permit for the proposed project be denied because the NJTA had not demonstrated the need for the project, nor had it adequately evaluated all possible alternatives to the proposed project.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES

Except for an occasional transit bald eagle (*Haliaeetus leucocephalus*) or peregrine falcon (*Falco peregrinus*), no other federally listed or proposed threatened or endangered species under Service jurisdiction pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), are known to occur within the project area. No further consultation pursuant to Section 7(a)(2) of the ESA is required by the Service. If project plans change, this determination may be reconsidered.

PROJECT PURPOSE AND NEED

The Service notes that traffic data used to justify the need for Route 92 have not been consistently presented. Instead, traffic data have been presented in several different documents and used to evaluate traffic in different manners. Earlier traffic data were primarily used to evaluate traffic with regard to the Level of Service (LOS) for various road segments and intersections. The LOS is rated on a scale of "A" through "F," with "A" being the best service and "F" being the worst service. However, the most recent information provided by the NJTA primarily discusses traffic with regard to the number of vehicle trips. Often data concerning vehicle trips are not tied to a LOS for the various road sections or intersections, making it difficult to compare current data to previously supplied data. An analysis of weaknesses associated with the NJTA traffic pattern presentation is detailed in our April 15, 1998 letter (enclosed) to the USEPA.

USEPA ALTERNATIVE ALIGNMENT

The USEPA identified a potential alternative Route 92 alignment (USEPA alternative) that would appear to significantly reduce wetland impacts and forest fragmentation when compared to the NJTA proposed alignment. The USEPA alignment would use the eastern portion of the NJTA alignment, then divert to the south near the 90-degree bend in Friendship Road, joining Scudders Mill Road west of the Scudders Mill Road / Dey Road intersection. NJTA would then improve Mill Road to accommodate the increased traffic generated by Route 92.

The USEPA alternative would reduce adverse impacts on forested wetlands by approximately 4.6 acres. In addition to reducing the area of wetland impacts, the adverse effects of these impacts would be less than the NJTA preferred alignment. As proposed, the NJTA preferred alignment would fragment a large block of forested wetlands associated with Devil's Brook. The Service expressed substantial concern regarding the impact of forest fragmentation from the NJTA preferred alignment on forest-interior neotropical migratory birds in the attachment to our

December 6, 1996 letter to the USEPA. The USEPA alternative would avoid the large block of forested wetlands associated with Devil's Brook, thereby greatly reducing project impacts to forest-interior neotropical migrants.

Information contained in the applicant's February 20, 1998 response document to the USEPA states that the USEPA alternative would reduce traffic on local east / west roads as well as Route U.S. 1 and Route 130. Therefore, it appears that the USEPA alternative would meet the project purpose.

The NJTA rejected the USEPA alignment because of impacts to farmland, proposed housing developments, and proposed and existing municipal open space. In rejecting the USEPA alignment, the NJTA stated that the USEPA alternative would indirectly impact 16.01 acres of farmland north of McCormack Lake by making the farmland inaccessible. The NJTA also indicated that USEPA's alternative would impact proposed housing developments. Consistent with the intent of the Section 404(b)(1) Guidelines, discharge of dredged or fill material in wetlands is discouraged when other alternatives exist. Clearly, proposed housing in agricultural fields would not deserve a higher level of protection than wetlands.

The applicant's document response states that the USEPA alternative would impact 19 acres of Plainsboro Township's proposed 550-acre open space, known as the Walker Gordon property. This property consists of agricultural fields and wetland forests. Additionally, according to the NJTA, the USEPA alternative would impact the existing Plainsboro Community Park, which consists of several baseball fields and other related facilities. The Service notes that impacts to the Walker Gordon property from the proposed NJTA alignment and the USEPA alternative would appear to be comparable since the NJTA alignment would pass through the northern section of the Walker Gordon property while the USEPA alignment would pass to the east and south of the property. Consistent with the 404(b)(1) Guidelines, use of proposed upland open space or baseball fields would be viable alternatives to the use of wetlands.

The Service's March 28, 1997 letter noted that the NJTA had not fully evaluated alternative Route 92 alignments, including alignments known as Alternative V and the Dey Road parallel. The development of the USEPA alternative further demonstrates that the NJTA has not fully evaluated alternative alignments.

WETLAND IMPACTS

Through previous design modifications, wetland impacts have been reduced from 32.9 to 15.98 acres for the NJTA alignment. Most of the wetland impacts that would occur from construction of the proposed project are located in a large wetland complex associated with the headwaters of Devil's Brook, a tributary to the Millstone River.

The Service previously expressed concern (Service letters dated December 6, 1996, March 28, 1997, and April 15, 1998) that the NJTA had not considered hydrologic impacts to wetlands that may occur as a result of construction of the proposed project. A construction technique referred to as "cut and fill" is proposed to construct the roadway through wetlands. Wetland soils incapable of supporting the proposed road bed would be removed and replaced with fill material. Replacement of wetland soils with fill material may result in a dam-like structure that would restrict the subsurface movement of water within the wetland system. Alteration of subsurface water flow could dewater wetlands downslope, and pond wetlands upslope of the proposed NJTA alignment. Any alterations to hydrology could adversely impact wetland plant communities and associated wildlife habitats within the project area. These additional wetland impacts have not been adequately addressed by the applicant.

AQUATIC RESOURCES OF NATIONAL IMPORTANCE

The Service's December 6, 1996 letter (see enclosure) to USEPA documents a large number of declining neotropical birds associated with forested or scrub wetlands that breed in the vicinity of the proposed Route 92 project location including great crested flycatcher, (*Myiarchus crinitus*), green heron (*Butorides striatus*), yellow-billed cuckoo (*Coccyzus americanus*), northern flicker (*Colaptes auratus*), wood thrush (*Hylocichla mustelina*), yellow warbler (*Dendroica petechia*), northern oriole (*Icterus galbula*), orchard oriole (*Icterus spurius*), and indigo bunting (*Passerina cyanea*). Declining or scarce neotropical migrants that utilize the site include golden-winged warbler (*Vermivora chrysoptera*), and Louisiana water-thrush (*Seiurus motacilla*). Since forested wetlands at the proposed site provide high-quality habitat for a large number of declining federal trust species, the Service considers this wetland complex as an Aquatic Resource of National Importance.

SUBSTANTIAL AND UNACCEPTABLE ADVERSE IMPACTS

Project implementation would result in substantial and unacceptable adverse impacts to fish and wildlife resources through direct habitat loss, and the cumulative loss of habitat when the results of fragmentation are considered. These losses would not be fully compensated by the proposed compensatory mitigation plan. Since a substantial portion of the forested wetlands is a maturing closed-canopy red maple forest, no mitigation plan can adequately compensate for loss of this habitat and its associated federal trust species.

COMPENSATORY MITIGATION

The NJTA proposed compensatory mitigation for wetland impacts and discussed the subject in its Preliminary Route 92 Conceptual Wetland Mitigation Plan (mitigation plan) dated December 6, 1996. Additional compensatory mitigation was noted in the March 29, 1999 permit issued by the New Jersey Department of Environmental Protection to NJTA. Following some design changes and resultant reduction in wetland impacts, the NJTA now proposes to construct

approximately 57 acres of freshwater wetlands to compensate for permanent impacts to 14.82 acres of palustrine open waters and wetlands. Most of the proposed compensatory mitigation would be in the form of forested, shrub, and emergent wetland communities. Wetland construction would be sited in two areas: north of Friendship Road near Hay Press Road and south of Friendship Road near Miller Road. Additionally, NJTA would preserve 250 acres of existing forested freshwater wetlands in the project vicinity.

Wetlands at both sites would be constructed from upland fields by removing soils down to the water table. Approximately 3 feet of soil would be removed from the southern mitigation site and approximately 10 feet from the northern mitigation site. Successful construction of forested wetlands is difficult in this situation and would be made more difficult by the removal of substantial quantities of soil in attempting to provide appropriate hydrologic conditions. Successful compensatory mitigation would have a higher likelihood of success if the NJTA were to restore, instead of create, wetlands. Restoration opportunities often have a higher probability of success due to existing hydrologic site conditions. For example, sites such as drained agricultural fields should be evaluated for wetland restoration opportunities. A review of 1995 aerial photographs indicates that drained wetlands occur near McCormack Lake.

CONCLUSION

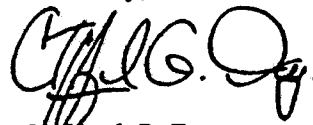
For non-water dependent projects such as the proposed project, the Section 404(b)(1) Guidelines state that the discharge of fill material into waters of the United States is prohibited unless it is clearly demonstrated that there are no practicable alternatives that would have fewer adverse impacts to the aquatic environment. Without a clear demonstration of the need for the proposed project, it is not possible to determine that other action alternatives or the "no-action" alternative are not practicable. The NJTA has not demonstrated that traffic on Route U.S. 1 would be unacceptable or that the proposed project would result in substantial improvements to traffic flow on Route U.S. 1. Additionally, the NJTA has not demonstrated that traffic on local east / west roads is unacceptable or that the proposed Route 92 alignment would result in substantial improvements in the Level of Service of local roads. Also, the NJTA has not demonstrated that the proposed project would substantially improve local intersections.

In addition to the above, the NJTA has not provided sufficient information to demonstrate that alternatives to the proposed project would fail to meet the project purpose. It is apparent that the USEPA alternate alignment would meet the project purpose while reducing impacts to wetlands and federal trust resources (e.g., neotropical migratory birds). Additionally, the NJTA has not fully evaluated impacts to wetlands associated with the proposed project nor demonstrated that all methods to minimize impacts to wetlands, associated with the currently proposed alignment, have been considered. Finally, the NJTA should carefully evaluate the USEPA alignment. Should the NJTA demonstrate the need for the proposed project, the Service would view the USEPA alignment as the least environmentally damaging alignment that has been presented to date.

Since the applicant has not supplied any additional information regarding alternatives and considering the above, documented flaws, the alternatives analysis is incomplete and the subject application does not comply with the Section 404(b)(1) Guidelines. The NJTA's additional proposed mitigation package fails to relieve the project of its essential flaws. Based upon review of the information contained in the permit as well as information contained in previous documents (see attachments), the Service concludes that implementation of the project as currently proposed would result in unacceptable adverse impacts to fish and wildlife resources and their supporting ecosystems. Additionally, the Service concludes that the NJTA has not adequately demonstrated a need for the proposed project and recommends denial of a Department of the Army permit.

Should the Corps consider granting a permit for this project over Service objections, please notify this office pursuant to the 1992 interagency Memorandum of Agreement. Should you have any questions regarding these comments, please contact Robert P. Russell or John Staples of my staff at (609) 646-9310.

Sincerely,

A handwritten signature in black ink, appearing to read "Clifford G. Day". The signature is stylized with a large "C" and "D".

Clifford G. Day
Supervisor

Enclosures



Mailing Address:
P. O. Box 439
Trenton, NJ 08625-04

Location:
501 East State Street
Trenton, NJ 08625

Robert C. Shinn, Jr.
Commissione

AUG 27 1997

Christine Todd Whitman
Governor

State of New Jersey
Department of Environmental Protection
Land Use Regulation Program
Tel. (609) 292-1235 Fax. (609) 292-8115

Robert Innocenzi
Frederick R. Harris, Inc.
485 B US Route One South
Islin, NJ 08830

RE: Letter of Interpretation/Line Verification
File No.: 1200-95-0001.1
Applicant: New Jersey Turnpike Authority
Block: various; Lot: various
Monroe, South Brunswick and Plainsboro Townships
Middlesex County

Dear Mr. Innocenzi:

This letter is in response to your request for a Letter of Interpretation to verify the jurisdictional boundary of the freshwater wetlands and waters on the referenced property.

In accordance with agreements between the State of New Jersey Department of Environmental Protection, the U.S. Army Corps of Engineers Philadelphia and New York Districts, and the U.S. Environmental Protection Agency, the NJDEP, Land Use Regulation Program is the lead agency for establishing the extent of State and Federally regulated wetlands and waters. The USEPA and/or USACOE retains the right to reevaluate and modify the jurisdictional determination at any time should the information prove to be incomplete or inaccurate.

Based upon the information submitted, and upon a site inspections conducted in April and May 1996, the Land Use Regulation Program has determined that the wetlands and waters boundary line(s) within the project corridor boundaries as shown on the plan map entitled "New Jersey Turnpike Authority, New Jersey Turnpike, Route 92, Wetlands Delineation Boundary Map, dated October 1995, sheets 1-6, 11-12, 14-19 revised May 10, 1996, sheets 9, 10 and 13 last revised September 25, 1996, sheets 7 and 8 last revised July 22, 1997, and prepared by Frederick R. Harris, Inc, are accurate as shown.

Any activities regulated under the Freshwater Wetlands Protection Act proposed within the wetlands or transition areas or the deposition of any fill material into any water area, will require a permit from this office unless exempted under the Freshwater Wetlands Protection Act, N.J.S.A. 13:9B-1 et seq., and implementing rules, N.J.A.C. 7:7A. A copy of this plan, together

with the information upon which this boundary determination is based, has been made part of the Program's public records.

Pursuant to the Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A-1 et seq., you are entitled to rely upon this jurisdictional determination for a period of five years from the date of this letter.

The freshwater wetlands and waters boundary line(s), as determined in this letter, must be shown on any future site development plans. The line(s) should be labelled with the above LURP file number and the following note:

"Freshwater Wetlands/Waters Boundary Line as verified by NJDEP."

In addition, the Department has determined that the resource classification of wetlands is as follows:

Swales and ditches of ordinary resource value

Sheet 2- PEM (6) and the wetlands delineated by flags XX1-XX3 and XX19-XX21

Sheet 3- PEM (8)

Sheet 10- drainage ditch (50) and the wetlands delineated by flags H-17 to H-22

Sheet 15- swale (72)

Sheet 19- PEM (89-93) and the ditch delineated by flags DE5 to DE27

Detention basins of ordinary resource value

Sheet 3- PEM (7)

Sheet 18- PEM (81)

Isolated wetlands of ordinary resource value

Sheet 18- PEM (79), (82-85)

Sheet 19- PEM (88)

State Open Waters

Sheet 8- POW (28)

Sheet 10- POW (47)

Sheet 17- POW/Retention Basin (76) and (77)

The remainder of wetlands within the project limit are intermediate resource value and the standard transition area or buffer required adjacent to these wetlands is 50 feet. In addition, the wetlands delineated by lines D, E, F, J, and K on sheet 1, labeled PEM (34) on sheet 9, PF01/PSSI (41) on sheet 10, PEM/PSSI (60) on sheet 13, PEM (66) on sheet 14 are isolated. Wetlands of ordinary resource value and State Open Waters do not require a wetland buffer.

This classification may affect the requirements for a Individual Wetlands Permit (see N.J.A.C. 7:7A-3), the types of Statewide General Permits available for the wetlands portion of this property (see N.J.A.C. 7:7A-9) and the modification available through a transition area waiver (see N.J.A.C. 7:7A-7). Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing rules for additional information.

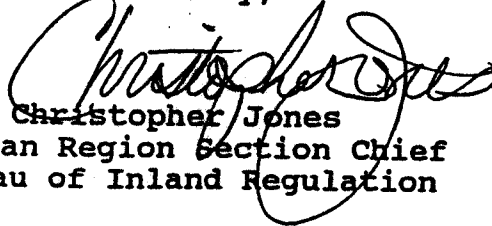
It should be noted that this determination of wetlands classification is based on the best information presently available to the Department. The classification is subject to change if this information is no longer accurate, or as additional information is made available to the Department, including, but not limited to, information supplied by the applicant.

This letter in no way legalizes any fill which may have been placed, or other regulated activities which may have occurred on-site. Also this determination does not affect your responsibility to obtain any local, State, or Federal permits which may be required.

In accordance with N.J.A.C. 7:7A-12.7, any person who is aggrieved by this decision may request a hearing within 30 days of the decision date by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, CN 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist.

Please contact Dr. Gary Bakelaar should you have any questions regarding this letter. Be sure to indicate the Program's file number in all communication.

Sincerely,

A handwritten signature in black ink, appearing to read "Christopher Jones", is written over the typed name and title.

Christopher Jones
Raritan Region Section Chief
Bureau of Inland Regulation

c: Municipal Clerk
Municipal Construction Official



State of New Jersey

Department of Environmental Protection

Office of Program Coordination

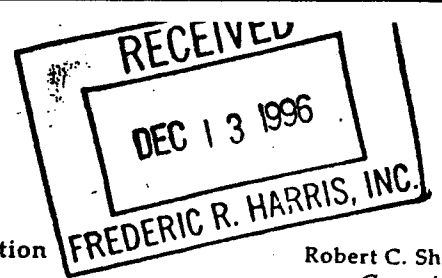
CN 418

Trenton, NJ 08625-0418

Phone 609-292-2662

Fax 609-777-0972

Christine Todd Whitman
Governor



Robert C. Shinn, Jr.
Commissioner

December 11, 1996

Mr. Robert Grimm
New Jersey Turnpike Authority
P.O. Box 1121
New Brunswick, NJ 08903

RE: Route 92

Dear Mr. Grimm:

The Office of Program Coordination of the New Jersey Department of Environmental Protection is providing the following additional review comments from our Department's Historic Preservation Office regarding potential impacts to cultural resources from the construction and operation of the proposed Route 92. The comments are based on the review of the following reports:

Route 92 Executive Order No. 215 Response Document, Volume I, prepared by Frederick R. Harris, Inc., February 29, 1996; prepared for the New Jersey Turnpike Authority

Combined Phase I and II Cultural Resources Investigations, NJ Route 92 Alternative E, US Route 1 to the New Jersey Turnpike, South Brunswick, Middlesex County, New Jersey, prepared by Patricia Madrigal, Clifford Zink, Michael Tomkins, Vincent Maresca and Richard Hunter, February 1995; prepared for Federic R. Harris Inc.

The summary of the findings of this review are that three historic architectural properties eligible to be listed in the New Jersey Register of Historic Places have been identified within the area of potential impacts of the project as currently designed. Two of those properties will be adversely affected by the project. Mitigating measures recommended to minimize the adverse impacts this project will have on two eligible historic architectural properties are acceptable to the Historic Preservation Office with the condition stipulated herein. No eligible archaeological properties have been identified within the area of potential impacts.

DETAILED COMMENTS

EXISTING ENVIRONMENT- IDENTIFICATION OF CULTURAL RESOURCES

Historic Architectural Resources

Three historic architectural properties along the proposed preferred alternative alignment (6E) have been identified which were determined eligible to be listed in the National Register of Historic Places by the State Historic Preservation Officer opinion dated September 4, 1986 pursuant to review under Section 106 of the National Historic Preservation Act of 1966 as amended, and therefore eligible to be listed in the New Jersey Register of Historic Places. The Historic Preservation Office reaffirms the eligibility of the three properties. The three properties are:

1. Van Pelt-Clark House,
2. Dey-Benjamin Bayles House,
3. and Major-Mount House.

Archaeological Resources

The Historic Preservation Office concurs with the submitted response document and attached report that there are no archaeological deposits within the area of potential impacts eligible to be listed in the New Jersey Register of Historic Places.

PROBABLE ENVIRONMENTAL IMPACTS

Historic Architectural Resources:

The proposed project will adversely impact two of the three historic architectural properties eligible to be listed in the New Jersey Register of Historic Places because it will alter characteristics of the properties which qualify them for inclusion in the New Jersey Register of Historic Places.

1. The Historic Preservation Office concurs with the submitted response document that the Van Pelt-Clark House is located in close proximity to the Route 92 mainline alignment and that the historic architecture and setting of the house will be adversely affected.
2. The Historic Preservation Office concurs with the submitted response document that the Dey-Benjamin Bayles House is located in close proximity to the Route 92 mainline alignment and that the historic rural setting of the house will be adversely affected.

Archaeological Resources

No archaeological properties have been identified within the area of potential impacts. Impacts, therefore, have not been assessed.

MITIGATION AND AVOIDANCE OF ADVERSE IMPACTS

Historic Architectural Resources

Mitigating measures developed to avoid/reduce the adverse effect this project will have on two of the three properties, i.e. Van Pelt-Clark House and Dey-Benjamin Bayles House, are acceptable to the Historic Preservation Office with the condition that specific landscape plans, specifications, and drawings are submitted to the Historic Preservation Office for review and comment prior to project commencement.

1. Van Pelt-Clark House - vegetative screening from the road alignment will be provided and appropriate measures taken to minimize vibrations during project construction.
2. Dey-Benjamin Bayless House - vegetative screening, particularly of the toll facility, will be provided to buffer the house from the road alignment.

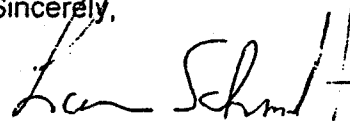
Archaeological Resources

The Historic Preservation Office concurs that no additional archaeological work is necessary.

If you have questions concerning this project review, please contact the Historic Preservation staff Carl Nittinger for architecture and Mike Gregg for archaeology at 609-292-2023.

Please remember that the New Jersey Executive Order No. 215 of 1989 environmental review process for this proposed project has not yet been completed.

Sincerely,



Lawrence Schmidt
Director
Office of Program Coordination

c: Dorothy P. Guzzo, NJDEP
Carl Nittinger, NJDEP
Mike Gregg, NJDEP
Gary Bakelaar, NJDEP
Christine Tiernan-Varricchio, FRH



State of New Jersey


Christine Todd Whitman
Governor

Department of Environmental Protection
Division of Parks and Forestry
Natural Lands Management
P.O. Box 404
Trenton, NJ 08625-0404
Tel. #609-984-1339
Fax. #609-984-1427

Robert C. Shinn, Jr.
Commissioner

MEMORANDUM

TO: Richard C. Reilly, Section Chief
Land Use Regulation, Northeast Engineering Section

FROM: Thomas F. Hampton, Administrator 

DATE: June 30, 1999

SUBJECT: Route 92, *Sagittaria australis* (southern arrowhead)

In your 6/16/99 memo, you stated that a permit will likely be approved for the above mentioned project, and that there may be some impacts to the southern arrowhead. You asked for my insights on appropriate mitigation, relocation etc. for impacts to the plant species.

In 1996, The applicant's consultant reported that 35% of the local population would be impacted by the proposed project (A.S. Greene Environmental Consultants). We have not done a detailed survey of the site, and can not confirm that the consultant's survey adequately identified, counted and located the plant species population at the site. Assuming the consultant's survey is accurate, we concur that at least 35% of the local population will be eliminated by proposed project. We have reviewed sheet #60 of the proposed grading plan produced by Christopher Nash of Boswell Engineering dated 10/30/96 with revisions dated 4/21 and 2/21. The revisions do not appear to lessen the impact of the project on the plants.

It is possible that additional plants in the vicinity will also be impacted by changes in hydrology, or by site disturbance. To lessen inadvertent damage to additional plants, it may be prudent to erect hard fencing around areas containing the rest of the plants within 150 feet of the area to be constructed to keep construction equipment or materials away from the plants. The fencing should be removed after the construction is complete and another inventory should be made of the plants to determine if additional plants were lost during the construction period.

We do not have any information on the ability of this species to withstand transplantation or the feasibility of creating habitat that replicates the natural habitat of viable native populations. The Office of Natural Lands Management generally does not promote transplantation as a preferred conservation technique for rare species because: 1) long term success rates are typically low; 2) species populations may not reproduce and persist in perpetuity in transplanted habitats; 3) the full range of habitat features that are

essential for the long term survival of a species is often poorly known and therefore difficult to reproduce; 4) the ecological role a species plays in a natural ecosystem may be lost when transplanted to an artificial habitat.

Should the applicant seek to plant and/or transplant this species on-site, as mitigation, to eliminate adverse affects on the population of plants, several issues need to be addressed. The applicant's consultant would have to present a plan that insures the long-term success of transplanting or planting the species. Because species populations may not reproduce and persist in perpetuity in transplanted habitats some means of continual monitoring and, if needed, maintenance of the population would have to be provided. Provisions would be needed to insure that if the selected new site does not adequately support the plants, reasons for the failure will be documented and another more suitable site will be established. The full range of habitat features that are essential for the long term survival of a species is often poorly known and therefore difficult to reproduce. Therefore, any mitigation should first thoroughly document the environmental and ecological setting of each subpopulation of the plants at the site prior to construction activities. Factors to be measured should include, but not be limited to, features such as soil type, water depth, source of water (groundwater or overland runoff), periodicity of saturation, flood dynamics (velocity and duration of flooding), and competition from other plant species. Sites targeted to receive transplanted/planted individuals should closely match original site conditions.

While it is conceivable that transplantation will mitigate the impact to the population, the habitat loss is still not mitigated. I suggest that you consider permanent protection of habitat for another population as mitigation for the habitat loss in this project. The only other high quality population in the state that we currently know of is in Upper Freehold Twp., Monmouth County. We believe the habitat for this population is not on state or federally protected lands. The applicant should investigate the ownership of this site (see attached) and provide a proposal for permanent protection through fee simple acquisition and transfer to a State or County land protection agency.

CONTACT MEMO

Date: December 15, 2004
Contacted: Mr. Mike Valent
Affiliation: NJDEP Division of Fish and Wildlife
By: Eileen Flarity-Loftus
Regarding: Bald eagle foraging habitat near Route 92 alignment
cc: File

Mr. Valent advised that the latest version (Version 2.0) of New Jersey Landscape Project Mapping available to the public on NJDEP's website does not show McCormack Lake and surrounding emergent wetlands as foraging habitat for a pair of nesting bald eagles. This is because this pair of bald eagles has recently established a nest near Carnegie Lake in Princeton and hence, their foraging habitat is not shown on Version 2.0 of the Landscape Project mapping. As long as this nest remains active, this pair's foraging habitat will be included in the next released version of Landscape Project mapping.